

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,
and listings, of claims in the application:

LISTING OF CLAIMS:

1-19. (Canceled)

20. (Currently Amended) An isolated enzymatically-active protein possessing a glutamine:fructose-6-phosphate amidotransferase (GFAT) activity comprising:

- a GFAT sequence and at least one purification tag sequence, the purification tag sequence being inserted between two consecutive amino acids of the GFAT sequence,

[[or]]

said GFAT sequence being a bacterial or eukaryotic sequence, or human GFAT sequence,

~~— a sequence deriving from the preceding sequence by suppression, insertion or mutation of at least one amino acid, provided that said protein has an enzyme activity, or~~

~~— a sequence having at least 35% sequence identity and/or at least 44% sequence similarity with one of the preceding sequences, provided that said protein has an enzyme activity.~~

said amino acids being included in a part of the GFAT sequence extending approximately between amino acids 220 to 230 of the *Escherichia coli* GFAT (SEQ ID NO: 13) or

said amino acids being included between amino acids:

- 298 to 306 of SEQ ID NO: 2, corresponding to the human GFAT1 sequence, or

- 299 to 307 of SEQ ID NO: 4, corresponding to the human GFAT2 sequence, or

- 316 to 324 of SEQ ID NO: 6, corresponding to the human GFAT1alt sequence.

21-25. (Canceled)

26. (Currently Amended) The isolated enzymatically-active protein possessing a GFAT activity of claim 20, in which the purification tag sequence is inserted between amino acids:

- 299 and 300 of SEQ ID NO: 2[[]]

- 300 and 301 of SEQ ID NO: 4

- 317 and 318 of SEQ ID NO: 6.

27. (Currently Amended) The isolated enzymatically-active protein possessing a GFAT activity of claim 20, in which the purification tag corresponds to a sequence of ~~approximately 2 to approximately 10 amino acids, in particular or approximately 4 to approximately 8 amino acids.~~

28. (Currently Amended) The isolated enzymatically-active protein possessing a GFAT activity of claim 20, in which the purification tag is a hexa-histidine.

29. (Currently Amended) The isolated enzymatically-active protein possessing a GFAT activity of claim 20, corresponding to the sequences:

- SEQ ID NO: 8, ~~corresponding to~~ consisting of the sequence SEQ ID NO: 2 in which a hexa-histidine is inserted between amino acids 299 and 300,

- SEQ ID NO: 10, ~~corresponding to~~ consisting of the sequence SEQ ID NO: 4 in which a hexa-histidine is inserted between amino acids 300 and 301, and

- SEQ ID NO: 12, ~~corresponding to~~ consisting of the sequence SEQ ID NO: 6 in which a hexa-histidine is inserted between amino acids 317 and 318.

30. (Canceled)

31. (Currently Amended) A ~~nucleic~~ An isolated acid comprising or being constituted by the nucleotide sequence:

- SEQ ID NO: 7 coding for the protein SEQ ID NO: 8, or
- SEQ ID NO: 9 coding for the protein SEQ ID NO: 10, or
- SEQ ID NO: 11 coding for the protein SEQ ID NO: 12[[],]

~~or by its complementary sequence, or being derived from said sequence by mutation, insertion or deletion of at least one nucleotide, provided that said nucleotide sequence codes for a enzymatically active protein.~~

32. (Currently Amended) A eukaryotic or prokaryotic vector comprising [[a]] an isolated nucleic acid of **claim 31**.

33. (Currently Amended) A purification process for [[a]] the isolated enzymatically-active protein possessing a GFAT activity of claim 20, from a solution comprising said protein, comprising a stage of bringing said solution into the presence of a compound binding specifically to the purification tag of said protein and a stage of separation of the complex formed by the binding of said protein to said compound from the other constituents of the solution.

34. (Currently Amended) The purification process of claim 33, comprising a stage of bringing a solution comprising a protein ~~corresponding to~~ consisting of the sequences SEQ ID NO : 8, SEQ ID NO : 10 or SEQ ID NO : 12, into the presence of a compound comprising a divalent metallic cation such as Ni²⁺ or Co²⁺, in particular Ni²⁺, and a stage of separation of the complex formed by the binding of the protein to said compound from the other constituents of the solution.

35. (Currently Amended) The purification process for [[a]] the isolated enzymatically-active protein possessing a GFAT activity of claim 20 ~~in an enzymatically active form, in particular~~ at -80°C or at 4°C, comprising the addition of said protein to a solution comprising:

- ~~approximately~~ 1 mM to ~~approximately~~ 10 mM of fructose 6-phosphate, ~~in particular approximately~~ or 1 mM,
- ~~approximately~~ 1 mM to ~~approximately~~ 5 mM of Tris(2-carboxyethyl) phosphine, ~~in particular approximately~~ or 1 mM,
- ~~approximately~~ 5% to ~~approximately~~ 20% of glycerol, ~~in particular approximately~~ or 10%.

36. (Currently Amended) ~~Composition A~~ a composition comprising an active GFAT protein, ~~if appropriate bound to a purification tag, such as~~ the isolated enzymatically-active protein possessing a GFAT activity according to claim 20, said protein being capable of being preserved in an enzymatically-active form, for at least 8 days at a temperature of 2°C to 10°C, in particular approximately 4°C, and for at least 12 months at a temperature of ~~-100°C~~ to -20°C, in particular approximately -80°C, said protein being in combination with:

- ~~approximately~~ 1 mM to ~~approximately~~ 10 mM of fructose 6-phosphate, ~~in particular approximately~~ or 1 mM,

- approximately 1 mM to approximately 5 mM of Tris(2-carboxyethyl) phosphine, ~~in particular approximately~~ or 1 mM,
- approximately 5% to approximately 20% of glycerol, ~~in particular approximately~~ or 10%.

37-38. (Canceled)